

REFERENCE  
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32.666 (81)  
Unexamined

55-32666 Sealed Alkaline Cell (Toshiba) Polyolefine copolymer sealant is used as sealant of button cells. (Pub. 4/2/81, Appl. 8/23/79)

TOKE \* L03 35501 D/20 \* J56032-666  
Closed type alkaline battery - uses sealing agent of polyolefin copolymer on battery can for improved mechanical strength etc.  
TOKYO SHIBAURA ELECT LTD 23.05.79 JP-106629  
A85 (02.64.81) H01m 02/08  
23.08.79 as 106629 (4pp23)

Closed type alkaline battery has sealing agent composed of polyolefin copolymer on the sealing part of the battery can. The copolymer has strong adhesion onto metal surface of anodic or cathodic can. Mechanical strength, cold-resistance, thermal-chemical properties are improved. Liquid leakage from gas pressure elevation is prevented for a long period.

In an example, polyamide insulating sealing material was provided on the sealing part between anodic can and cathodic can. Polyolefin copolymer was further coated on the contacting part of the cathodic or anodic can surface, which was heated at 220 deg.C for 15 sec. Electrolyte liquid of KOH aq. soln. was sealed in the battery. The copolymer compsn. was composed of 60 wt.% polyethylene and 20 wt.% polypropylene and 10 wt.% polybutyrene and 10 wt.% polyamylene and the coating thickness was 60 microns.

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REFERENCE

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Japanese Unexamined Patent Application, 56-32666, April 2, 1981

Title: Sealed Alkaline Cell

Application: August 23, 1979

Sr: 54-106629

Inventors: T. Nakamura et al

Applicant: Toshiba Electric Co, *Tokyo Shibaura Electric Co Ltd*

It relates to a method of sealing alkaline cells.

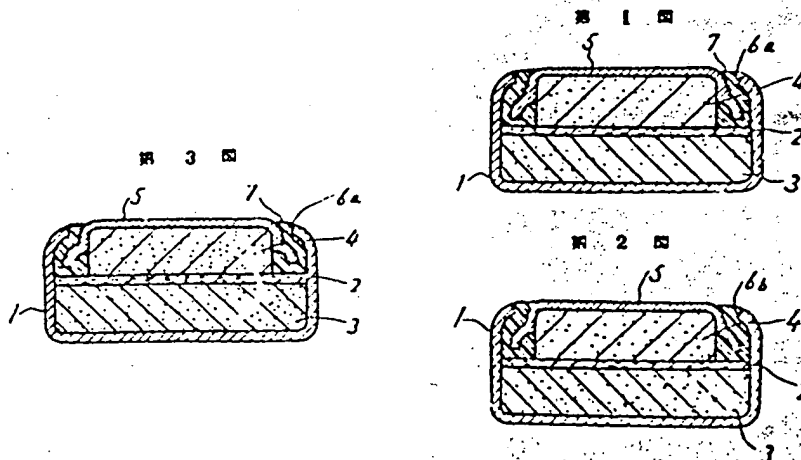
Sealing of alkaline cells is difficult because of creeping of the electrolyte thru the gaps between gasket and cell can. To prevent creeping, asphalt or resin film is formed over the surface of gasket. These sealants are not satisfactory for long-time use.

In this invention, copolymer of polyolefine is used as sealant (7) to cover the surface of gasket (6a, 6b). To further improve the adhesion between the cell can and the gasket, it is recommended to heat-treat at 180-250C.

Typical copolymer sealant of this invention comprises 25-75 wt% of polyethylene, polypropylene, polybutylene or polyamilene, and the remainder contg one of other polyolefine listed above.

Example: A copolymer of polyethylene 60 wt%, polypropylene 20 wt%, polybutylene 10 wt% and polyamilene 10 wt% is applied over a polyamide gasket with a thickness of 60µm, and heated at 220C for 15 sec.

Claim: Sealed alkaline cell in which a copolymer of polyolefine is used as sealant to cover the gasket.



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